

Louisiana's *N. fowleri* Response & Emergency Rule Update



DEPARTMENT OF HEALTH
AND HOSPITALS

Overview

- Louisiana Background
 - St. Bernard & DeSoto Parishes
 - Emergency Rule
 - Increased Monitoring Requirements
- Laboratory Testing Capacity
- Surveillance Monitoring
- Chlorine Residuals
- Additional Responses
- Positive TCR History Review
- Questions

Source Code	Count of Louisiana PWS	Population
GW	1180	60.11%
GWP	76	2.75%
SW	58	35.17%
SWP	46	1.97%
Grand Total	1360	100.00%

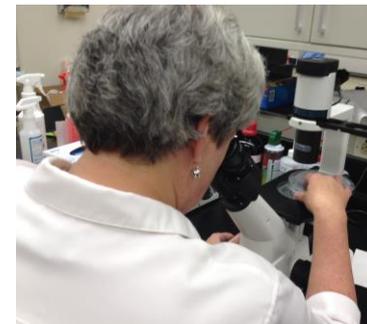
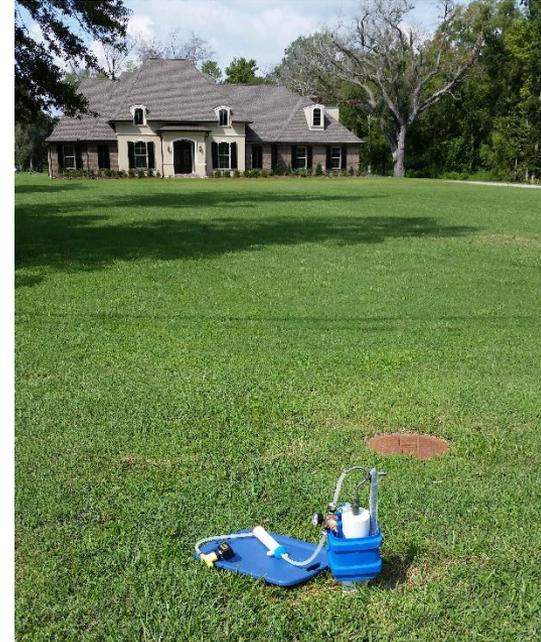
Disinfection	Percentage of Louisiana PWS	Population
Chloramines	9.6%	52.8%
Free Chlorine	89.9%	47.1%
None	0.4%	0.1%

Louisiana Background

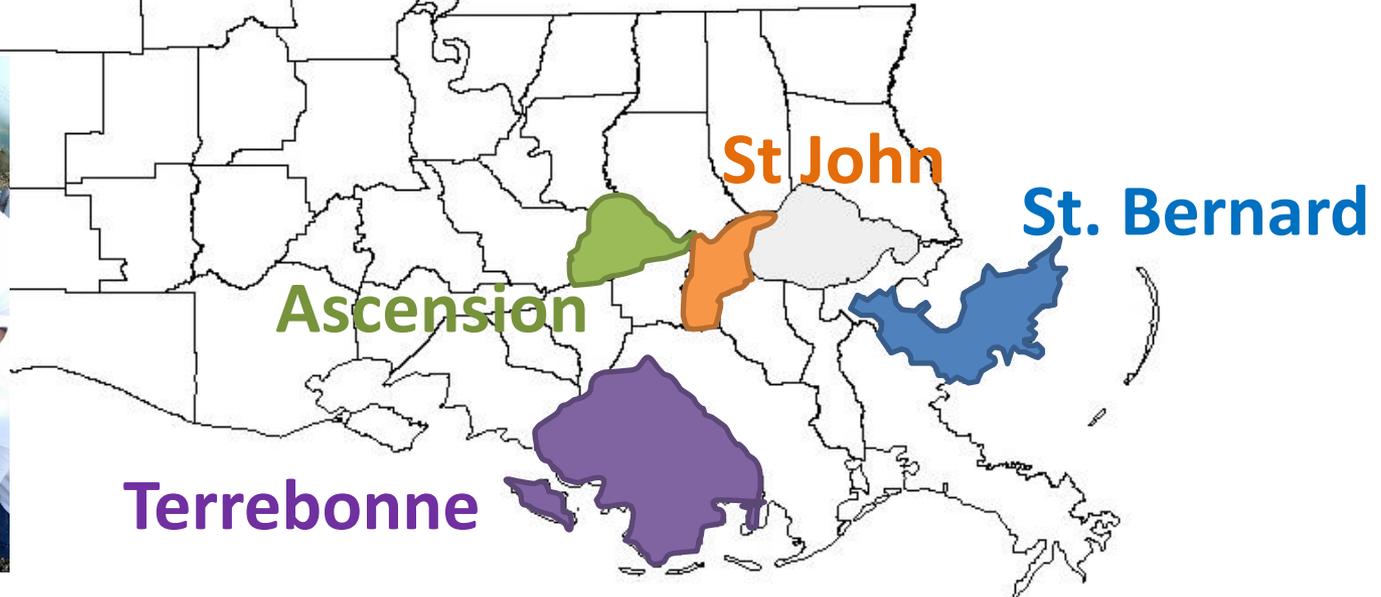
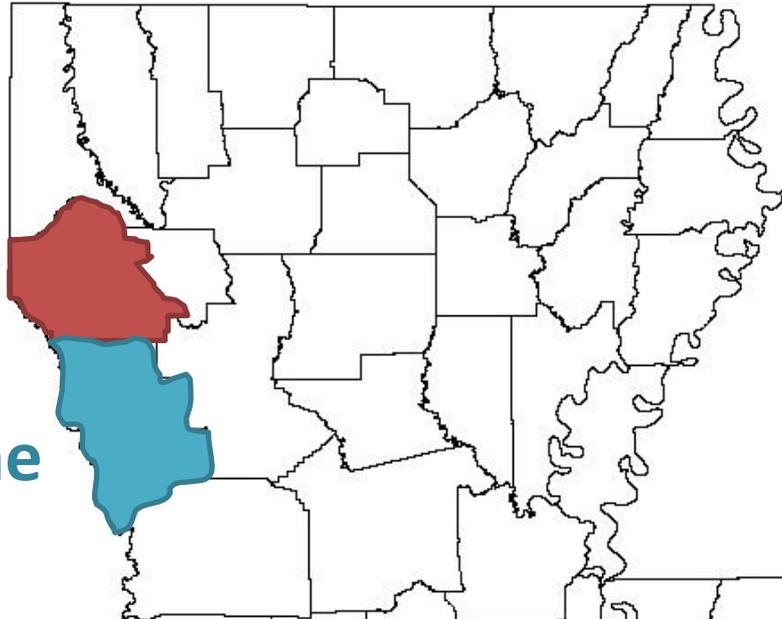
- **Testing** conducted in 2013 by Louisiana DHH/CDC in both St. Bernard and DeSoto **found *Naegleria fowleri* in the treated water supply distribution system.**
- Louisiana DHH issued an Emergency Rule requiring public water systems to maintain **a minimum 0.5 mg/L** disinfectant residual in the distribution system.
- The Emergency rule also required **increased monitoring for disinfectant residuals, revised TCR monitoring plans and required nitrification control plans** among other things.
- Louisiana began **surveillance monitoring for *N. fowleri*** during the warm weather season of 2014 and 2015.
- To date a total of 6 public water systems have tested positive for *N. fowleri*. All have been systems using surface water with chloramine disinfection. **Common issue: low to no chlorine residuals and evidence of significant to complete nitrification** in areas where *Nf* was detected.

LDHH Develops Laboratory Testing Capacity

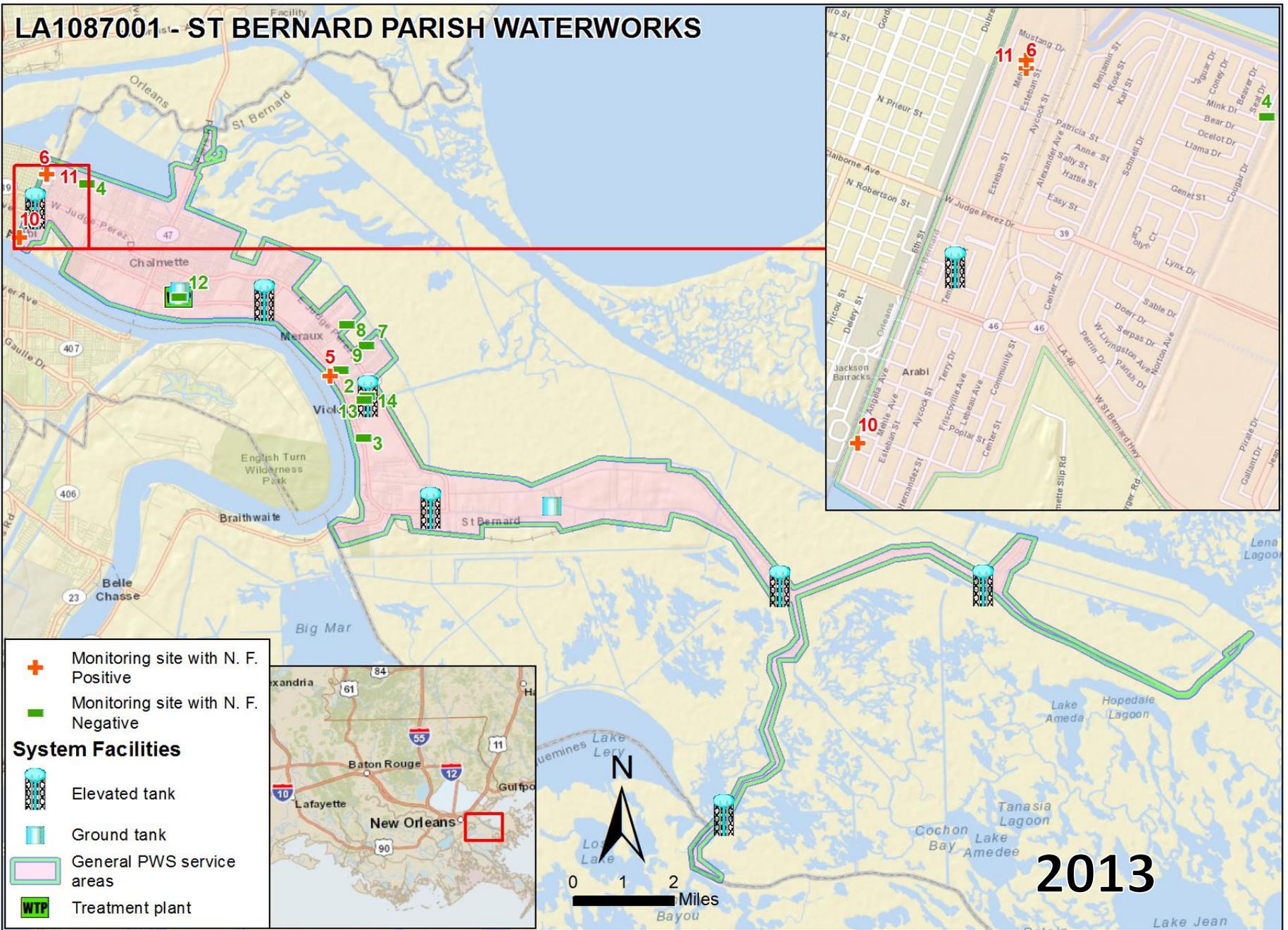
- Following methods in peer reviewed literature, CDC, Australian health authorities, and other laboratories
 - 100L samples on ultrafilters
 - E.coli culture plated on Nelson's agar and incubated at 42 deg C for up to 7 days
 - Inspected daily for amoebae
 - Trophozoites indicate thermophilic amoebae
 - Flagella positive amoebae are the genus *Naegleria*
 - qPCR to determine *Naegleria fowleri*
- Working on implementation of testing for *Acanthamoeba* by PCR.



Louisiana Parishes with *Nf* Detections



LA1087001 - ST BERNARD PARISH WATERWORKS

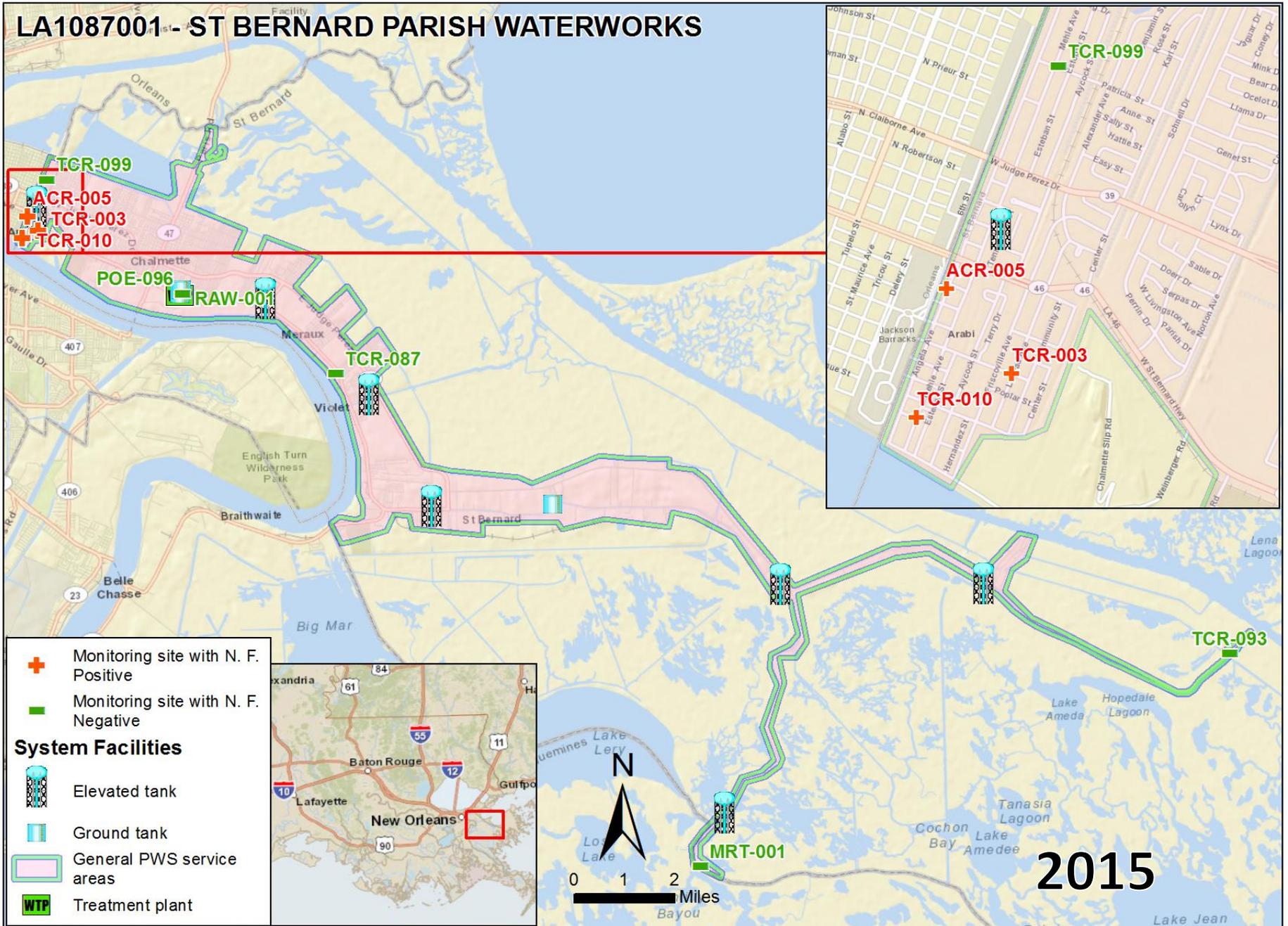


- + Monitoring site with N. F. Positive
 - Monitoring site with N. F. Negative
- System Facilities**
- Elevated tank
 - Ground tank
 - General PWS service areas
 - Treatment plant



2013

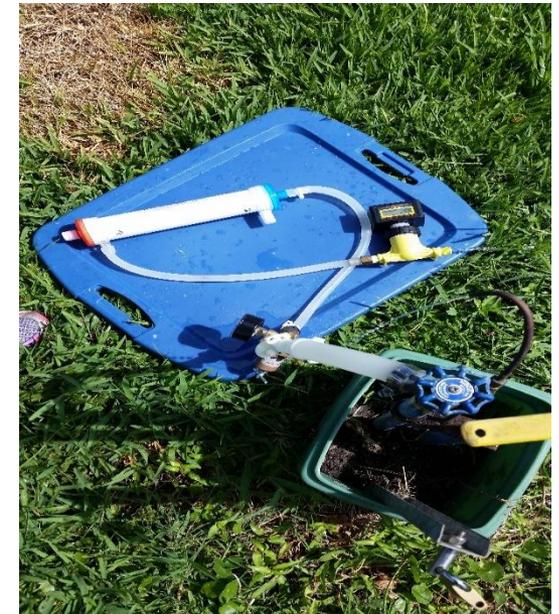
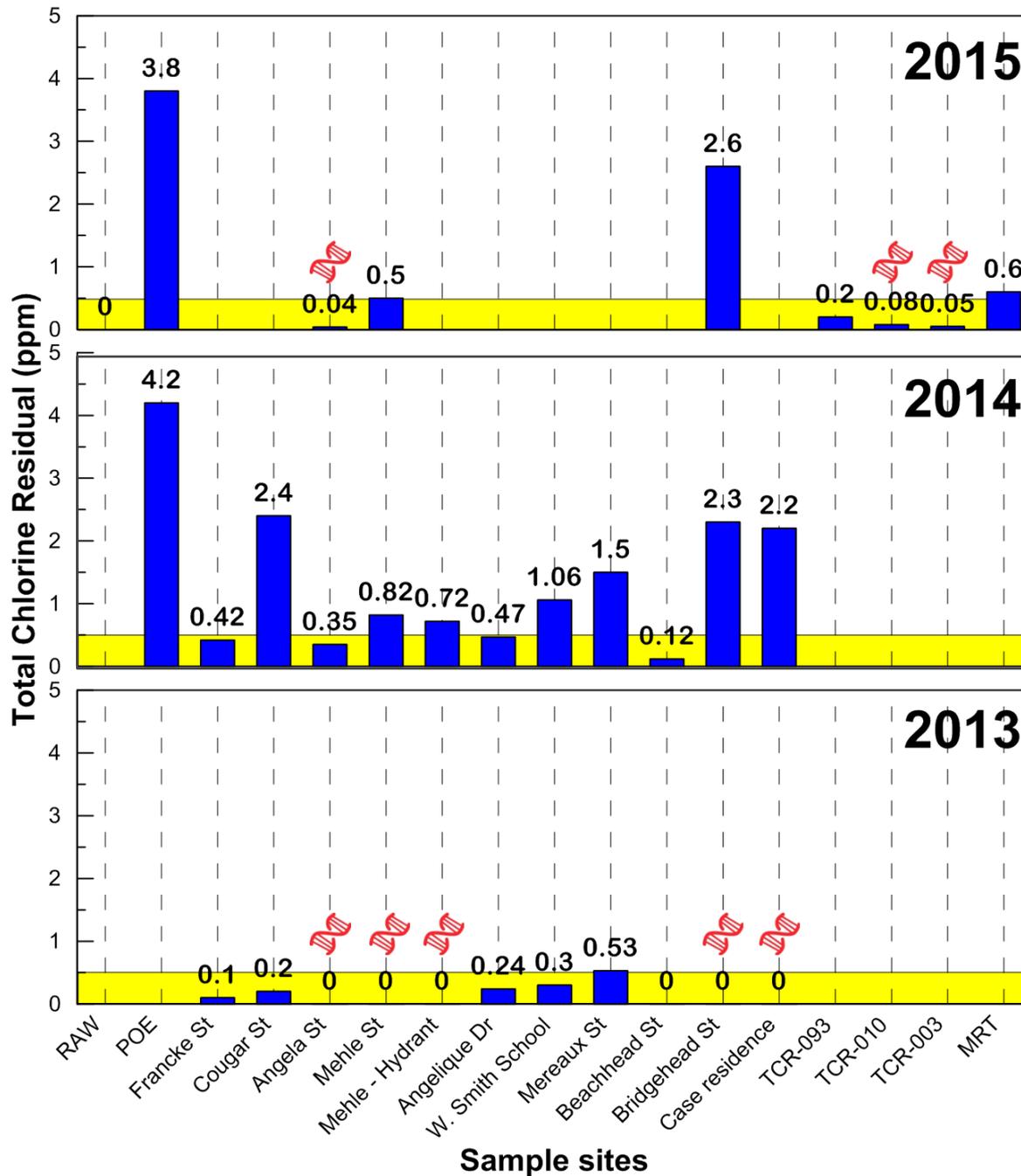
LA1087001 - ST BERNARD PARISH WATERWORKS



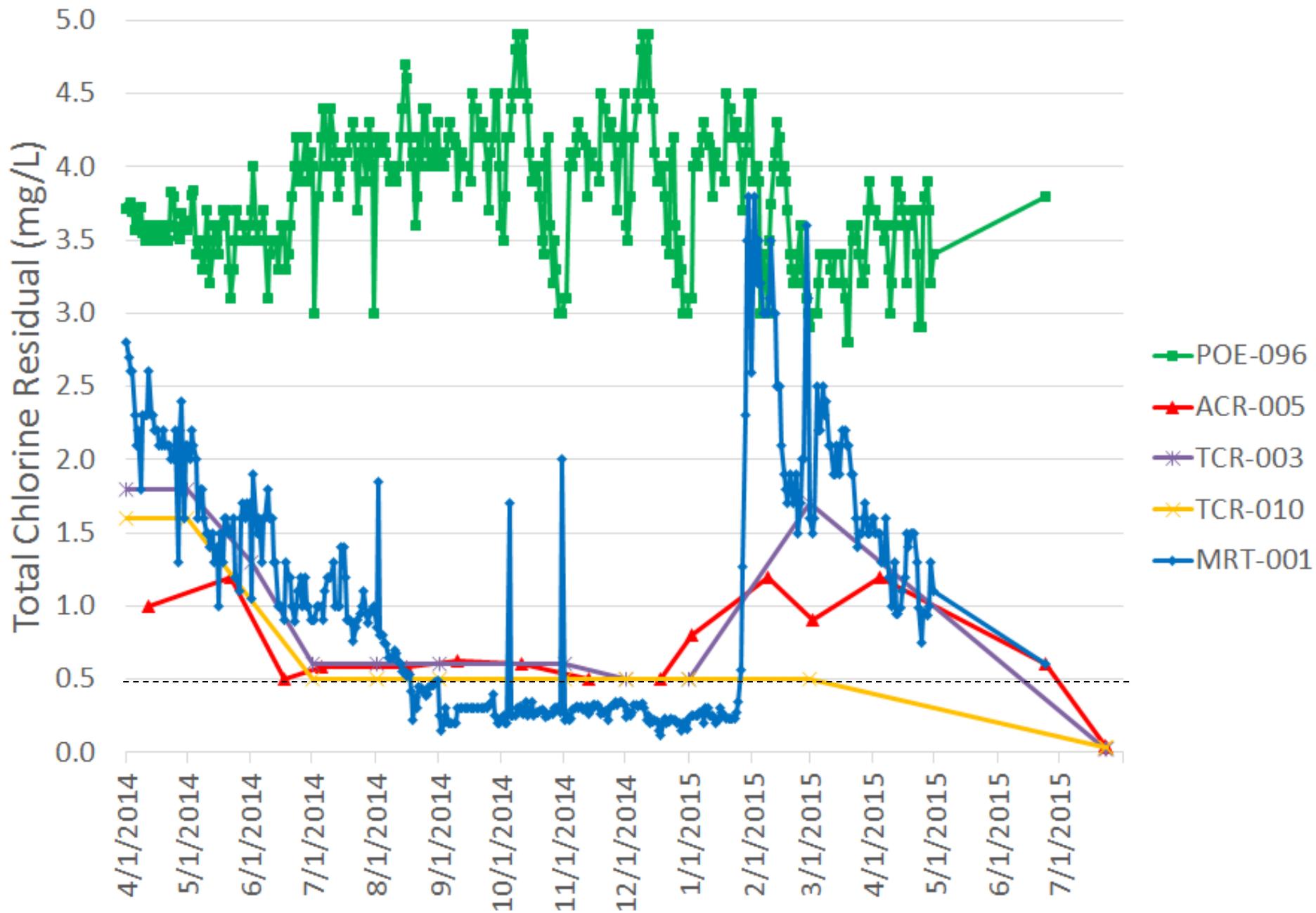
St Bernard Pipe Section Cut Out



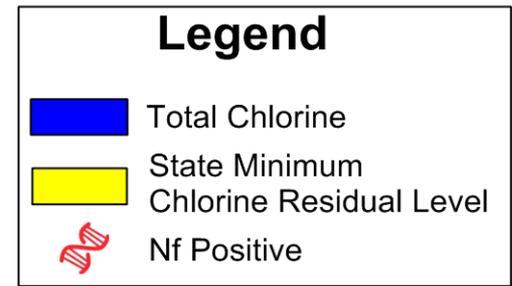
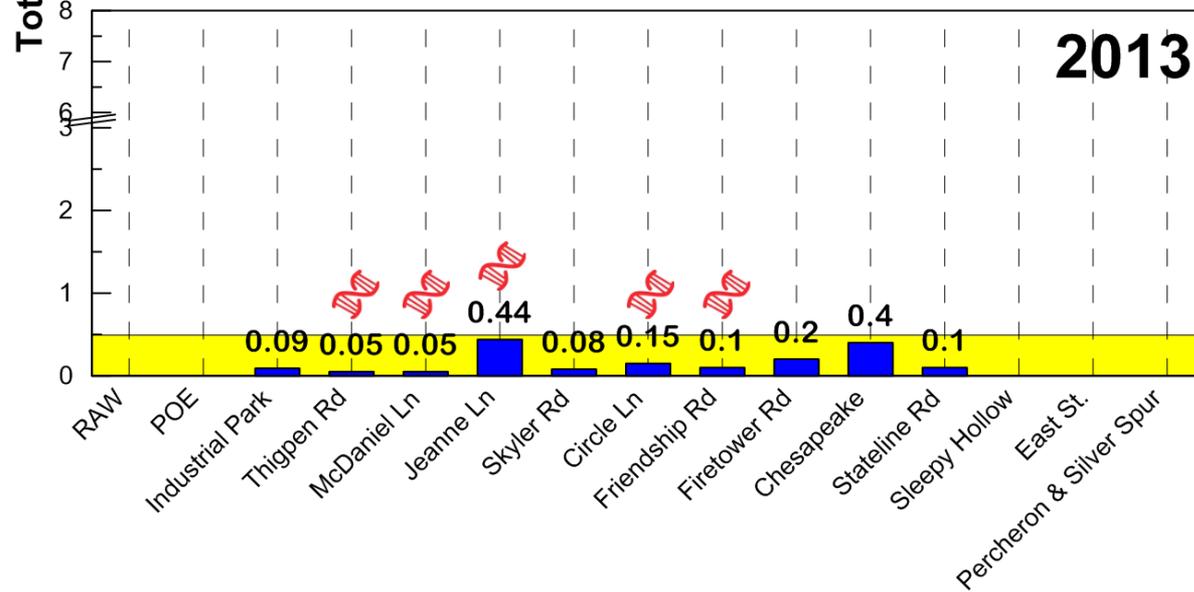
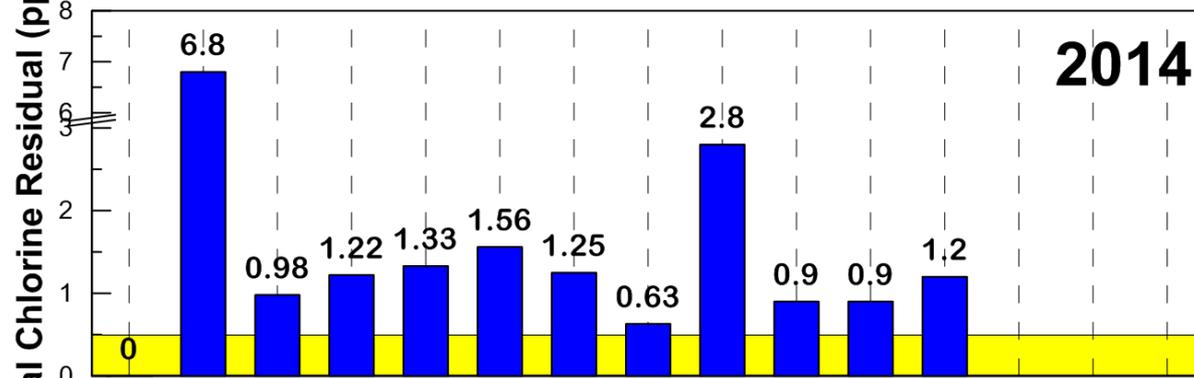
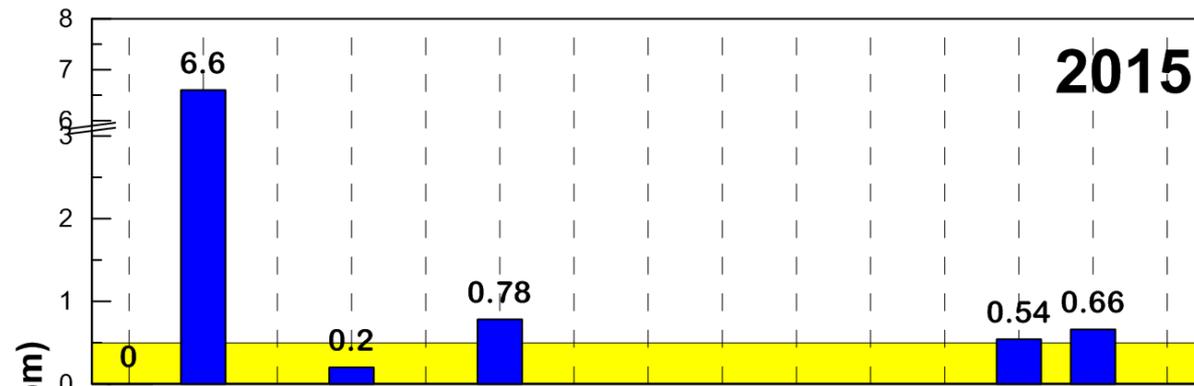
St Bernard *N. fowleri* Testing Locations and Results



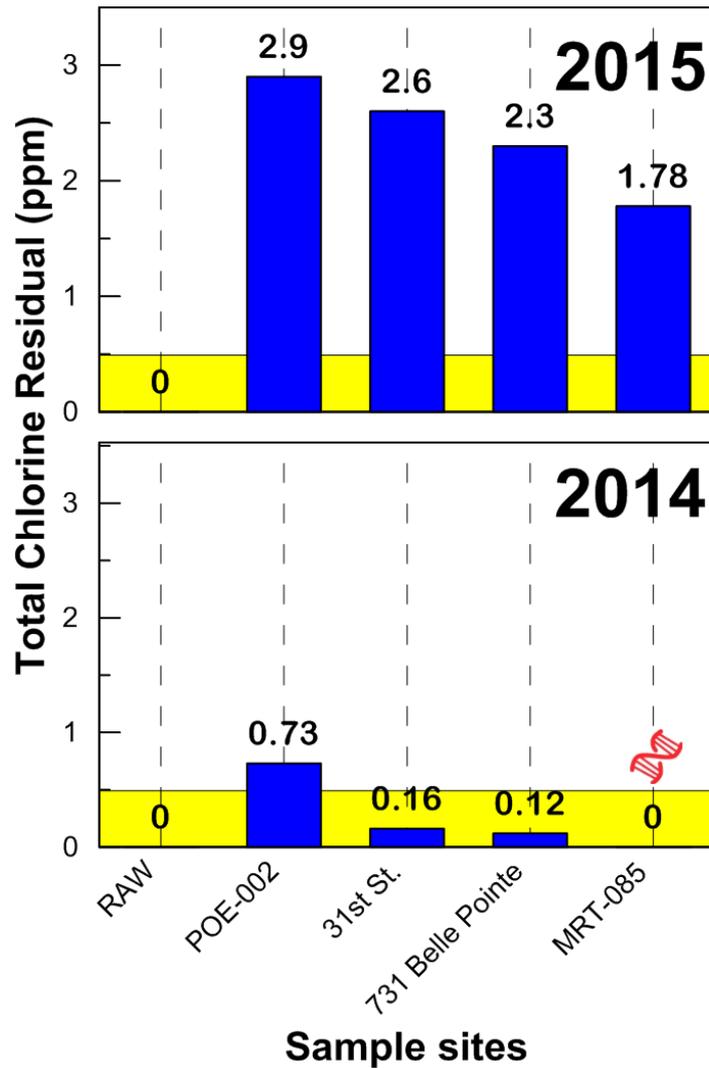
LA1087001 ST BERNARD PARISH WATERWORKS



Desoto *N. fowleri* Testing Locations and Results

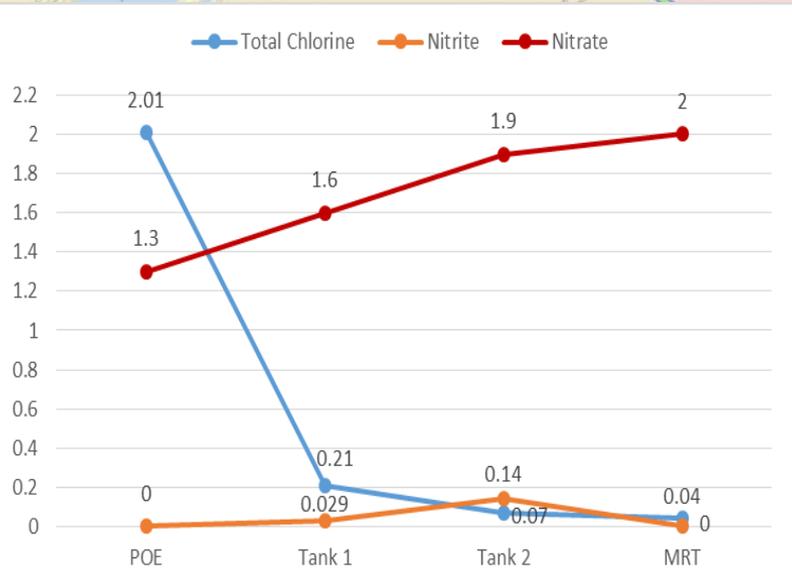


St John District 1 *N. fowleri* Testing Locations and Results

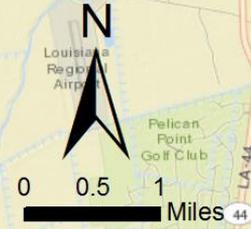


LA1005045 - ASCENSION CONSOLIDATED UTILITY DIST. 1

2015

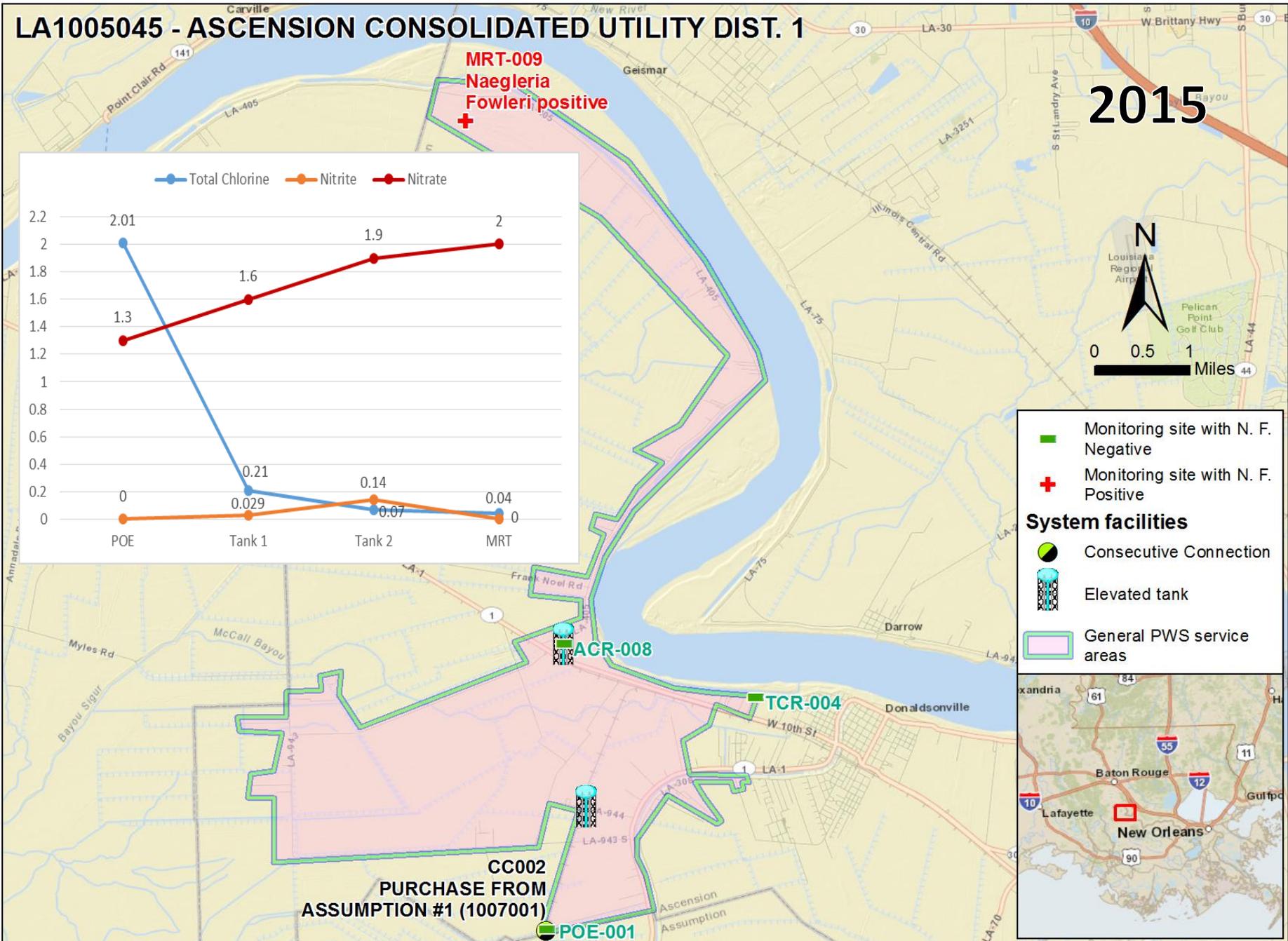


MRT-009
Naegleria
Fowleri positive
+

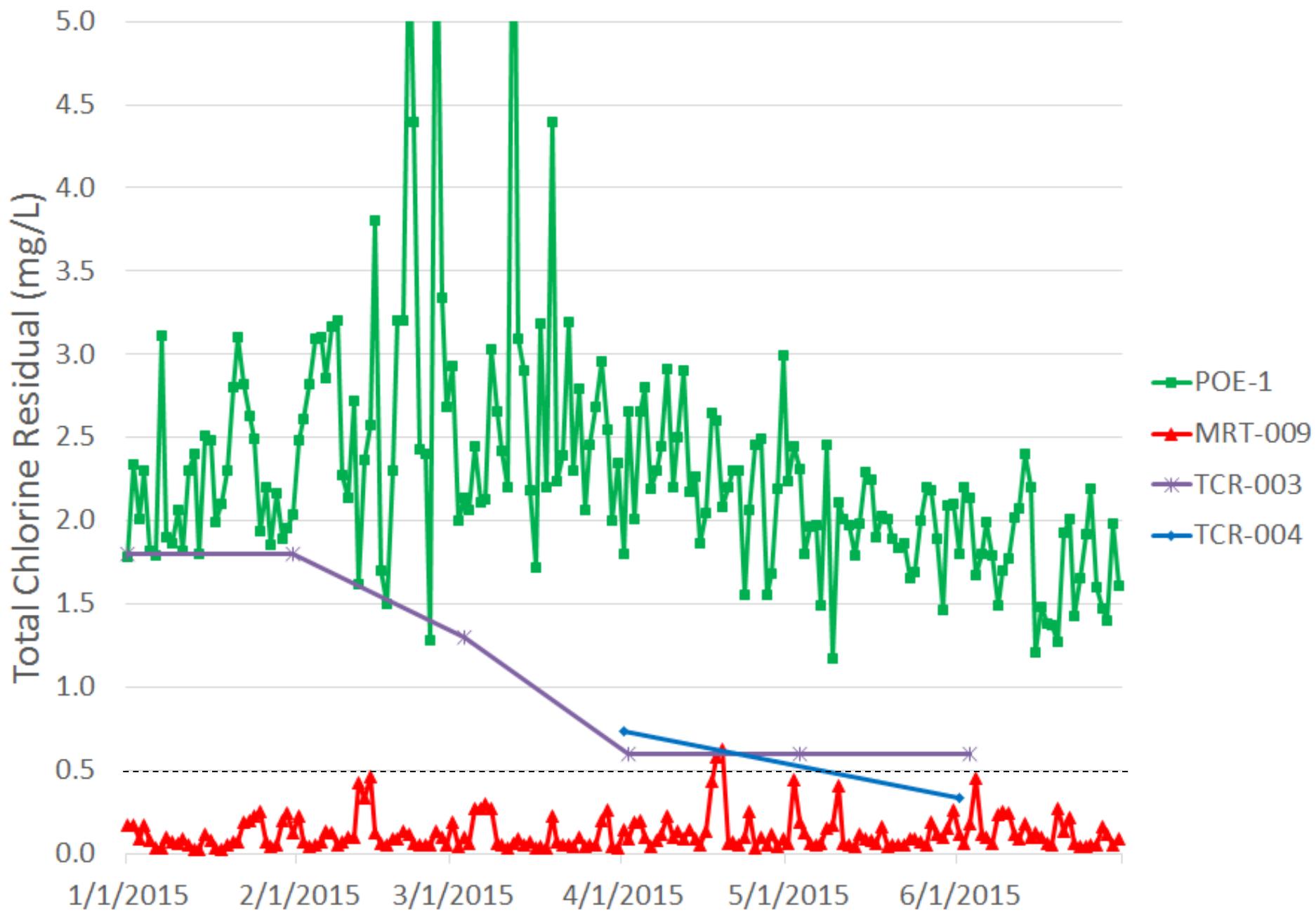


- Monitoring site with N. F. Negative
 - + Monitoring site with N. F. Positive
- System facilities**
- Consecutive Connection
 - Elevated tank
 - General PWS service areas

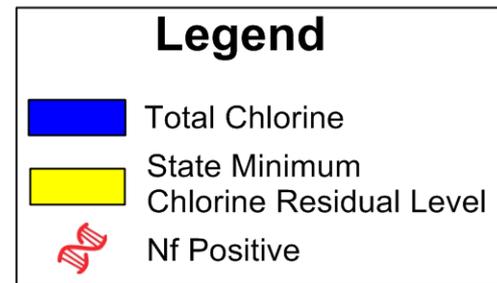
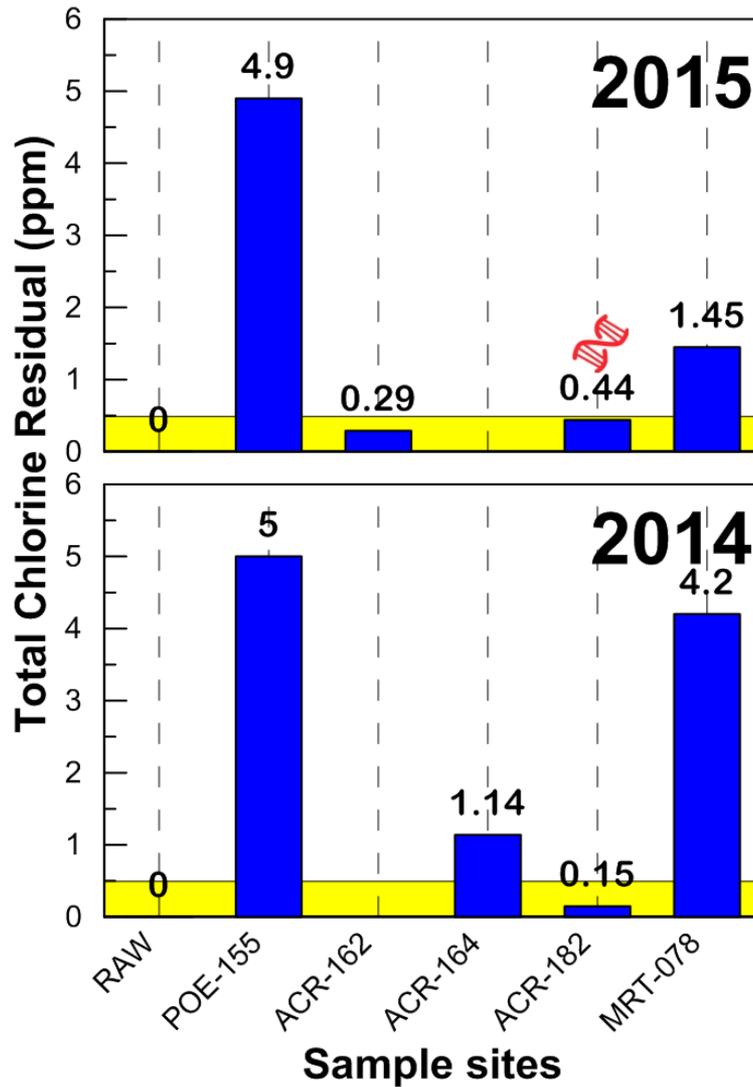
CC002
PURCHASE FROM
ASSUMPTION #1 (1007001)



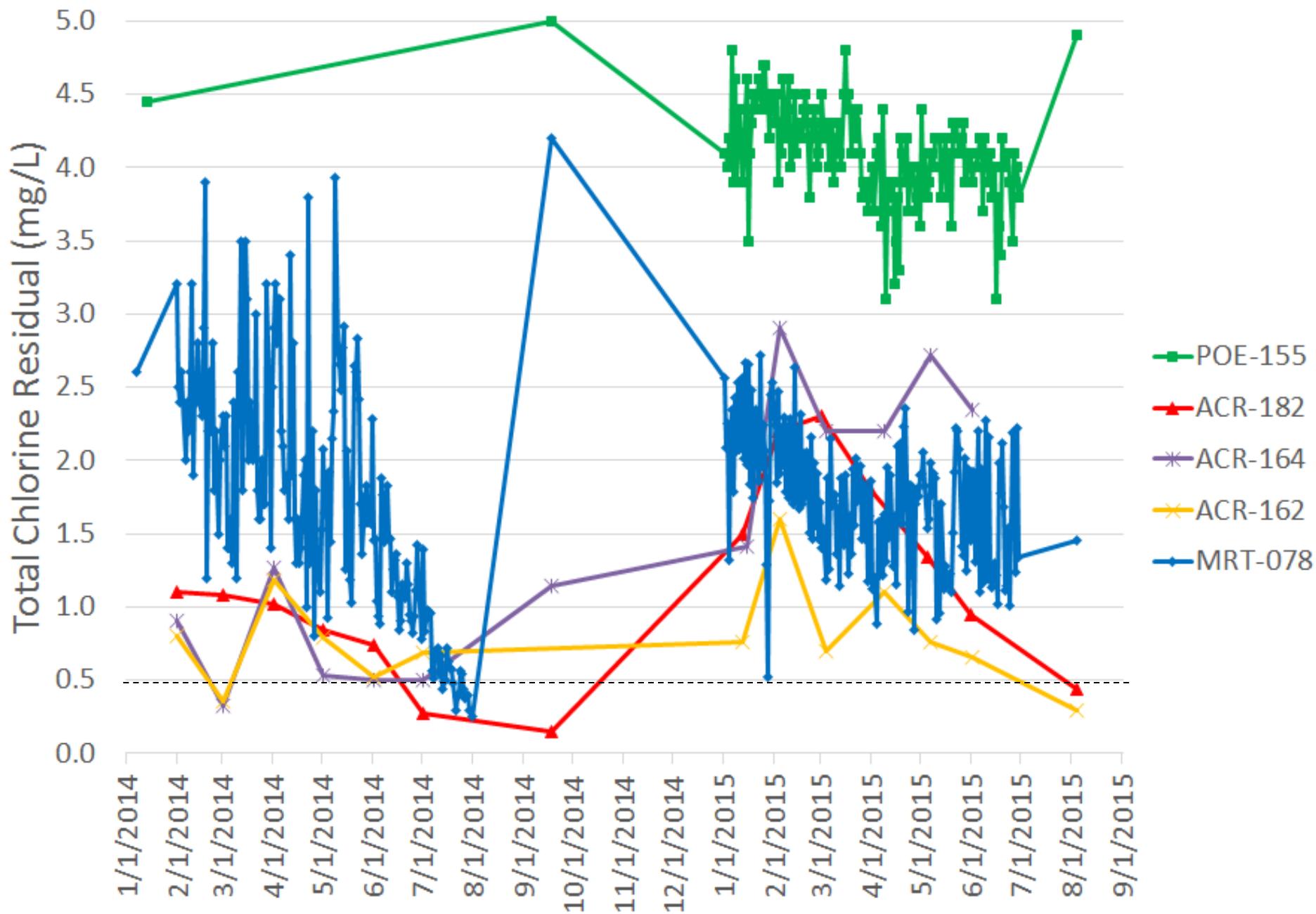
LA1005045 Ascension Consolidated Utility District 1



Schriever Water System *N. fowleri* Testing Locations and Results



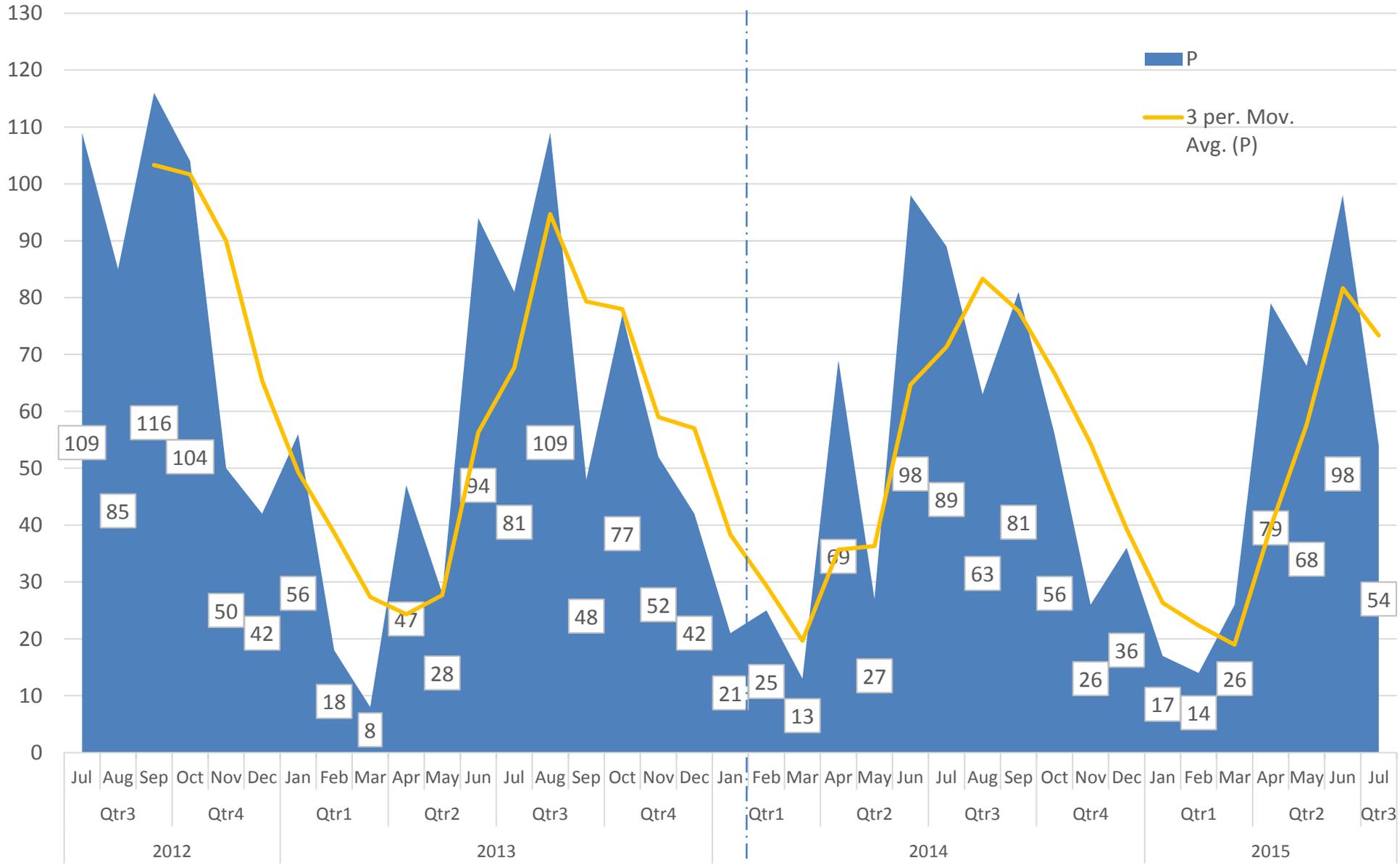
LA1109002 Schriever Water Treatment Service Area



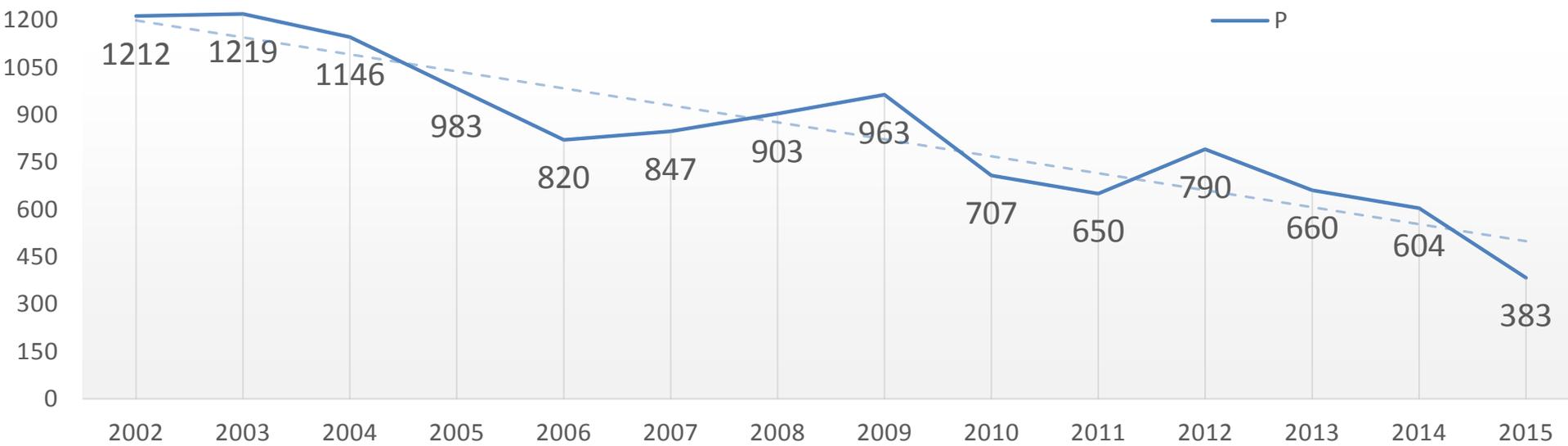
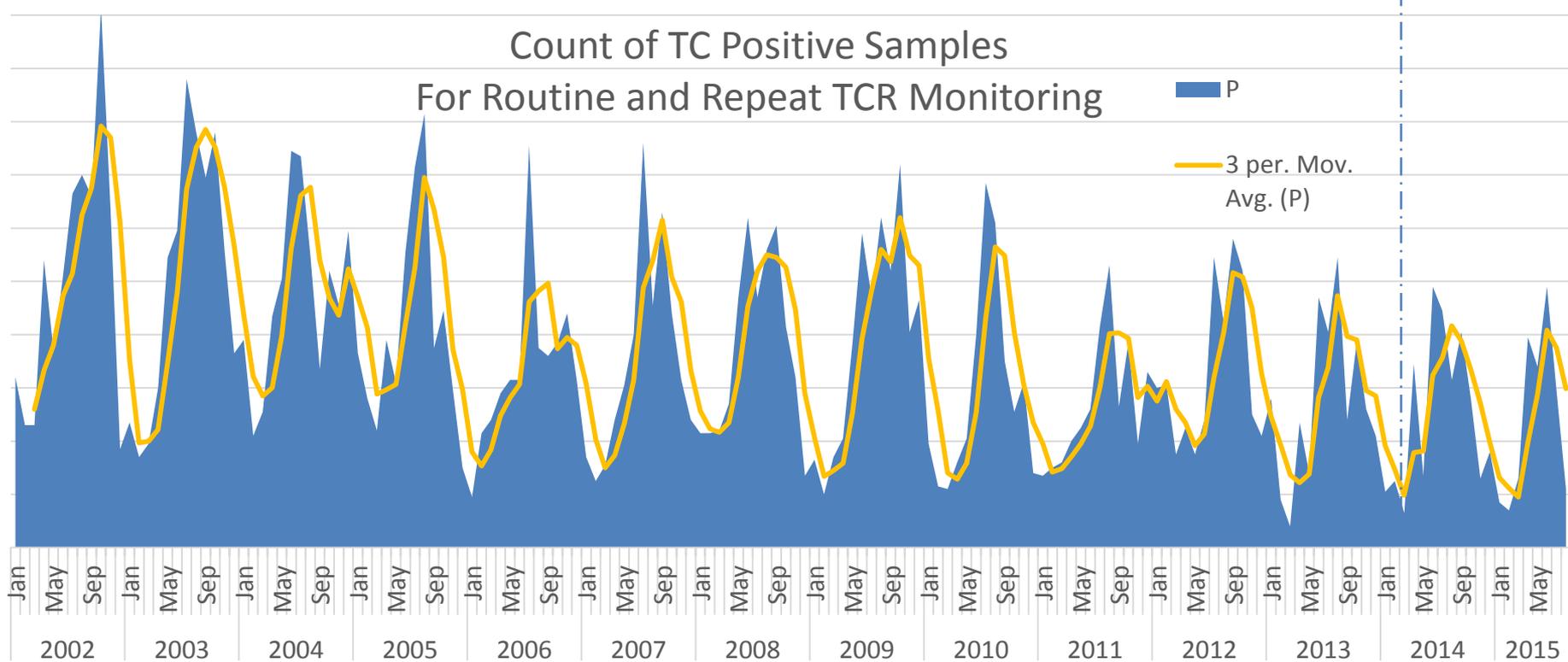
Additional Responses

- Water system training
 - Plan to deliver eight 8-hour chloramine disinfection training classes across the state
 - Focus on understanding, PREVENTING, detecting, and actively responding to nitrification in the distribution system
- Information management system improvements
 - Disinfectant residual data capture and reporting
 - Monitoring Plan Portal Integration with our new OPH Lab information management system for sample collection.
 - Capture individual chlorine residuals electronically
- HCR 54 of the 2015 Louisiana Legislative Session
 - Directs the secretary of the Department of Health and Hospitals to promulgate rules through the notice of intent process to replace the series of declared emergency rules that the department has adopted no later than December 31, 2015

Count of TC Positive Samples For Routine and Repeat TCR Monitoring



Count of TC Positive Samples For Routine and Repeat TCR Monitoring



Questions

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LDHH Safe Drinking Water Program:
www.dhh.la.gov/SafeDrinkingWater

Louisiana Information and Press Releases on *Naegleria fowleri*:
www.dhh.la.gov/waterfacts